

ASSOCIATED PULP AND PAPER MILLS LTD.

BORE LOGS

EXPLORATION LICENCE 21/70

BALLARAT CLAY PTY. LTD.

72-919

MICROFILMED

AMG REFERENCE POINTS ADDED

000

ASSOCIATED PULP AND PAPER MILLS LIMITED
BORE LOGS - EXPLORATION LICENCE EL 21/70

710002

SCOTTS AREA

BORE No. SS1

0' - 18'	Brown clay and gravel		
18' - 23'	Brownish granite saprolite, some surface stains.		
		Brightness 70.5	Yeild 37%
23' - 28'	Brownish saprolite	Br. 72.0	Y. 39%
28' - 33'	" "	Br. 77.6	Y. 26%
33' - 38'	Clean white saprolite	Br. 80.5	Y. 37%
38' - 43'	White plastic saprolite	Br. 77.5	Y. 35%
43' - 48'	White trace of green	Br. 79.0	Y. 34%
48' - 53'	White green tint	Br. 79.0	Y. 31%
53' - 58'	White green tint	Wet Br. 76.5	Y. 35%

BORE No. SS2

0' - 6'	Clay and gravel		
6' - 7'	Red pug		
7' - 17'	Hardpan, gravel and drift		
17' - 12'	Brownish, fin grained saprolite	Br. 64.0	Y. 41%
22' - 27'	" paler, fine secondary mica	Br. 64.5	Y. 35%
27' - 32'	Cream saprolite with fine mica	Br. 67.2	Y. 34%
32' - 37'	" colour better	Br. 69.1	Y. 34%
37' - 42'	" trace of green	Br. 71.0	Y. 35%
42' - 47'	" " "	Br. 71.0	Y. 34%
47' - 52'	" " "	Br. 71.5	Y. 35%
52' - 57'	" " " More quartz	Br. 76.5	Y. 37%

BORE No. SS3

0' - 8'	Gravel and clay drift		
8' - 13'	Cream saprolite, some mica, low in quartz		
13' - 18'	" " " "		
18' - 23'	" " " "		
23' - 28'	" " " "	Br. 77.5	Y. 37%
28' - 33'	" " " "		
33' - 38'	" " " " Lower yield		
38' - 43'	" " " " Brownish colour		
43' - 48'	" " " " Brownish colour		
48' - 50'	" " " " Trace of green		
50' - ?	" " " " Green and brown		

BORE No. SS4

0' - 5'	Gravel and clay drift		
5' - 15'	White and Fe stained saprolite		
15' - 20'	Saprolite, good colour, ? high yield		
20' - 25'	" " "		
25' - 35'	" white and Fe stained		
35' - 45'	" "	Br. 63.5	Y. 40%
45' - 50'	" "	Br. 68.5	Y. 39%

BORE No. SS5

0' - 5'	Gravel and clay drift		
5' - 7'	Hardpan		
7' - 12'	Buff coloured saprolite	Br. 73.8	Y. 60%
12' - 17'	" " "	Br. 75.5	Y. 44%
17' - 22'	" " "	Br. 69.0	Y. 38%
22' - 27'	" " "	Br. 69.0	Y. 43%
27' - 32'	White and buff saprolite, damp	Br. 65.0	Y. 46%
32' - 37'	White and buff saprolite, damp	Br. 62.0	Y. 45%
37' - 42'	" " " "	Br. 64.0	Y. 57%
42' - 47'	" " " "	Br. 67.0	Y. 41%
47' - 52'	" " " More Quartz	Br. 73.0	Y. 37%
52' - 57'	Buff coloured saprolite	Br. 66.0	Y. 41%

BORE No. SS6

No information available.

BORE No. 557

No information available.

BORE No. SS8

0' - 18'	Gravel and clay drift		
18' - 23'	Buff stained saprolite	Br. 73.0	Y. 43%
23' - 28'	Grey to buff saprolite	Br. 61.0	Y. 42%
28' - 33'	Green, low quartz, ? saprolite	Br. 63.3	Y. 81%
33' - 38'	Buff, low quartz ? saprolite	Br. 65.0	Y. 78%
38' - 43'	Buff saprolite with fine mica	Br. 71.4	Y. 47%
43' - 48'	" " "	Br. 64.4	Y. 37%
48' - 53'	" " "	Br. 71.5	Y. 41%
53' - 58'	" " "	Br. 71.5	Y. 41%
58' - 68'	Pale green, no coarse quartz ?saprolite	Br. 68.9	Y. 84%

BORE No. SS9

0' - 24'	Gravel and clay drift		
24' - 29'	Buff saprolite with white flecks	Br. 60.9	Y. 43%
29' - 34'	" " "	Br. 61.6	Y. 30%
34' - 39'	" " "	Br. 63.0	Y. 34%
39' - 44'	" " "	Br. 67.0	Y. 40%
44' - 49'	Buff saprolite, little coarse quartz	Br. 64.0	Y. 33%
40' - 54'	" " "	Br. 66.5	Y. 38%
54' - 59'	" " "	Br. 65.5	Y. 38%

BORE No. SS10

No information available.

BORE No. SS11

0' - 10'	Clay, gravel and sand		
10' - 15'	Cream to buff saprolite	Br. 75.7	Y. 35%
15' - 20'	" " "	Br. 76.5	Y. 43%
20' - 25'	Cream and white saprolite	Br. 83.0	Y. 47%
25' - 30'	" " "	Br. 81.5	Y. 37%
30' - 32'6"	" " "	Br. 81.5	Y. 33%
31' - ?	" " "		

BORE No. SS12 (Drillers log)

0' - 6'	Sandy brown clay
6' - 12'	Green clay

BORE No. SS13 (Drillers log)

0' - 1'	Black soil
1' - 3'	Brown and white clay
3' - 10'6"	White clay
	Water to ground level

BORE No. SS14

0' - 1'	Hardpan
1' - 10'	Drift
10' - 15'	White and brown clay
20' - 25'	Grey and brown clay
25' - 30'	Dark grey clay

BORE No. SS15 (Drillers log)

0' - 9'	Drift
9' - 14'	Yellow and white clay
14' - 19'	White and grey clay
19' - 26'	Green clay

BORE No. SS16

No information available

002

BORE No. SS17 (Drillers log)

0' - 20' Drift. No clay Water at 2'.

BORE No. SS18 (Drillers log)

0' - 1' Surface soil
 1' - 1'9" Hardpan
 1'9"- 10' Pink and white clay
 10' - 14' White and yellow clay
 Water at 2'

BORE No. SS19 (Drillers log)

0' - 5' Red and white clay
 5' - 11' Orange clay
 No Water

BORE No. SS20 (Drillers log)

0' - 3' Hardpan
 3' - 17' Drift
 No Clay Water at ground level

BORE No. SS21 (Drillers log)

0' - 14' Yellow and red drift and clay
 14' - 21' Yellow clay and drift
 Water at 3'

BORE No. SS22

0' - 18' Drift and Yellow clay
 Water at 2'

BORE No. NS23

0' - 10'	Gravel and coloured clay drift		
10' - 15'	Cream saprolite, vegetable stained	Br. 75.5	Y. 46%
15' - 20'	" " less stained	Br. 74.5	Y. 44%
20' - 25'	Buff saprolite	Br. 65.5	Y. 40%
25' - 30'	" "	Br. 66.6	Y. 39%
30' - 35'	Buff to dark grey saprolite	Br. 61.5	Y. 36%
35' - 40'	Grey saprolite	Br. 54.5	Y. 35%
40' - 45'	" " colour better	Br. 62.5	Y. 38%
45' - 50'	Off-white saprolite	Br. 64.5	Y. 38%
50' - 55'	" " "	Br. 71.5	Y. 44%
55' - 60'	" " "	Br. 75.5	Y. 35%

Water at ground level

BORE No. NS 24

0' - 7'	Fe stained saprolite		
7' - 12'	Cream saprolite	Br. 74.2	Y. 50%
12' - 17'	" "	Br. 73.5	Y. 48%
17' - 22'	" "	Br. 73.7	Y. 42%
22' - 27'	" " Fe stained	Br. 75.6	Y. 39%
27' - 32'	" "	Br. 72.5	Y. 39%
32' - 37'	Grey saprolite	Br. 67.5	Y. 44%
37' - 42'			

BORE No. 5-1974

0M - 0.3M Surface soil
 0.3M - 1.5M Brown and white clay
 1.5M - 3.0M Stained granite saprolite, some hard felspar
 3.0M - 4.5M White saprolite, tinge of green, some hard felspar
 4.5M - 6.0M Putty coloured saprolite

BORE No. 6 -1974

0M - 0.3M Surface soil
 0.3M - 3.0M Brown clay
 3.0M - 4.5M Fe stained saprolite
 4.5M - 4.95M Fe stained saprolite Wet.

BORE No. 7 - 1974

0M - 1.5M Soil and clay
 1.5M - 3.0M Putty coloured saprolite, Fe and vegetable stained.
 Whitens on exposure.

BORE No. 1 - 1975

0' - 5' Buff coloured granite saprolite, dries white
 5' - 30' " " " " " "
 30' - 60' " " " " " "
 with green tint increasing with depth.

BORE No. 2 - 1975

0' - 30' Buff coloured saprolite, dries white
 30' - 35' " " " trace of green
 35' - 50' " " " green increasing

BORE No. 3 - 1975

0' - 15' Buff coloured saprolite, dries white
 15' - 30' Green tinted saprolite, dries white Br. 74.5
 30' - 40' " " " " "
 40' - 60' Yellow saprolite Br. 70.5

BORE No. 4 - 1975

0' - ? Stained granite, no kaolinization

BORE No. 5 - 1975

0' - ? Stained granite, no kaolinization

BORE No. 6 - 1975

0' - 5' Fe stained saprolite
 5' - 15' " " " colour improving
 15' - 35' Near white saprolite
 35' - 55' " " " Br. 69.5
 55' - 60' " " " Br. 73.0

SELECTED SURFACE SAMPLE - 1975

Br. 79 43% above 75 microns, 38% below 12 microns, 28% below 5 microns.

BROWNS AREA

=====

BORE No. 1 - 1974

0 M - 6.0M Yellow clay

BORE No. 2 - 1974

0 M - 4.95M Brown and yellow clay
 4.95M - 7.35M High yield saprolite with patches of red and yellow colour.

BORE No. 3 - 1974

0 M - 3.0 M High yield, putty coloured secondary clay with coarse quartz.
 3.0M - 4.5 M " " " "
 4.5M - 6.0 M " " " "

BORE No. 4 - 1974

0M - 3.0 M Brown sandy clay, some coarse quartz
 3M - 4.5 M " " "
 4.5M - White hardpan

YZ WORKINGS

BORE No. 1 -1970

0' - 5'	Brown granite saprolite		
5' - 10'	" " "		
10' - 15'	" " "		
15' - 20'	Cream to yellow saprolite		
20' - 25'	Cream to white saprolite	Br. 75.9	Y. 52%
25' - 27'	Cream saprolite, brown tinge	Br. 76.4	Y. 50%

BORE No. 2 -1970

0' - 5'	Brown saprolite		
5' - 10'	Red to brown saprolite		
10' - 25'	Cream to brown, red flecks		
25' - 30'	Cream to white saprolite	Br. 70.0	Y. 39%
30' - 35'	" " "	Br. 75.1	Y. 42%
35' - 40'	" " "	Br. 72.4	Y. 42%

BORE No. 3 -1970

0' - 5'	Dark brown clay and gravel		
5' - 10'	Red brown saprolite		
10' - 15'	Red to cream saprolite		
15' - 20'	Green to white saprolite		
20' - 35'	White to cream saprolite	Br. 74.0	Y. 28%
35' - 40'	Green saprolite		

BORE No. 4 -1970

0' - 5'	Brown to yellow clay and gravel		
5' - 10'	Brown to cream saprolite		
10' - 20'	Grey to white saprolite	Br. 76.0	Y. 35%
20' - ?	Green saprolite		

AMBER HILL AREABORES No. 1, 2 & 3

Logs not available. These three bores all passed through clay and gravel drift into coloured saprolite without intersecting any useful material.

BORE No. 4 -1970

0' - 5'	Soil and clay		
5' - 10'	White and grey granite saprolite or granitic drift	Br. 76.6	Y. 39%
10' - 15'	White and grey granite saprolite or granitic drift	Br. 73.5	Y. 26%

BORE No. 5 -1970

0' - 5'	Soil and gravel		
5' - 10'	Cream saprolite with Fe stains	Br. 78.7	Y. 42%
10' - 15'	Cream saprolite little Fe	Br. 78.8	Y. 41%
15' - 20'	Cream and white saprolite	Br. 77.7	Y. 39%
20' - ?	" " "		

BORE No. 6 -1970

0' - 5'	Soil and gravel		
5' - 10'	Cream saprolite with Fe stains	Br. 77.9	Y. 45%
10' - 15'	Cream & white saprolite, little Fe	Br. 81.0	Y. 42%
15' - 20'	Cream & white saprolite	Br. 82.7	Y. 42%
20' - ?			

BORE No. 7 -1970

0' - 5'	Soil and gravel		
5' - 10'	Cream and white saprolite	Br. 86.0	Y. 46%
10' - 15'	" " " some Fe stains	Br. 85.0	Y. 55%
15' - 20'	" " Fe increasing	Br. 82.8	Y. 51%
20' - ?	" "		

BORE No. 8 - 1970

No useful material intersected.

BORE No. 9 - 1970

No useful material intersected.

BORE No. 10 - 1970

0' - 5'	Soil and gravel		
5' - 10'	Cream to buff saprolite, coarse quartz	Br. 79.9	Y. 44%
10' - 15'	" " " "	Br. 78.0	Y. 34%
15' - 20'	" " " "	Br. 77.0	Y. 33%
20' - ?	" " " "		

BORE No. 11 - 1970

0' - 10'	Soil and gravel		
10' - 15'	Cream to white saprolite	Br. 75.0	Y. 34%
15' - 20'	Cream saprolite, coarse quartz	Br. 71.0	Y. 18%
20' - ?	" " " "		

BORE No. 12 - 1970

No useful material intersected.

BORE No. 13 - 1970

No useful material intersected.

BORE No. 14 - 1970

0' - 5'	Soil and gravel		
5' - 10'	Cream and white saprolite Fe stains	Br. 81.0	Y. 39%
10' - 15'	" " " "	Br. 81.5	Y. 44%

BORE No. 15 - 1973

0' - 5'	Gravelly soil, some heavily stained saprolite		
5' - 10'	Yellow and white saprolite		
10' - 15'	White saprolite, some yellow patches at top		
15' - 20'	White saprolite.		
20' - 25'	White saprolite, yellow at base.		
25' - 30'	Yellow saprolite		
30' - 35'	Intense yellow saprolite.		

BORE No. 16 - 1973

0' - 8'	Soil and gravel		
8' - 10'	Brown and white saprolite		
10' - 15'	White saprolite		
15' - 20'	Saprolite, white then yellow		
20' - 25'	Yellow and white saprolite		
25' - 30'	" " " " paler		
30' - 35'	Yellow and white saprolite, some granular feldspars		

BORE No. 17 - 1973

0' - 10'	Soil and gravel		
10' - 15'	Fawn and yellow saprolite		
15' - 20'	White saprolite, sparse yellow stains		
20' - 25'	White saprolite, some yellow stains		
25' - 30'	Pale yellow saprolite, some granular feldspar		
30' - 35'	Intense yellow saprolite, some granular feldspar		

BORE No. 18 - 1973

0' - 10'	Soil and gravel		
10' - 15'	Brown to white saprolite		
15' - 20'	Good white saprolite		
20' - 25'	White to yellow saprolite, some granular feldspar		

BORE No. 19 - 1973

0' - 5'	Soil and gravel		
5' - 28'	Pale Yellow kaolinized drift.		

006

BORE No. 20 - 1973

0' - 6' Soil and gravel
6' - 20' White to grey - green saprolite, very sparse Fe stains
degree of kaolinization reducing with depth.
20' - ? Scarlet and green partially kaolinized granite.

BORE No. 21 - 1973

0' - 10' Soil and dark yellow granite detritus

BORE No. 22 - 1973

0' - 18' Soil and partially kaolinized pale green drift

BORE No. 23 - 1973

0' - 20' Soil and yellow kaolinized granite drift

LARK CREEK AREA

=====

BORE No. 1 - 1974

0 M - 1.5M White granite saprolite
1.5M - 3.0M " " "
3.0M - 3.3M " " "
3.3M - ? Hard bottom

BORE No. 2 - 1974

0 M - 1.5M White saprolite
1.5M - 3.0M " "
3.0M - 4.5M " "
4.5M - ? " "

BORE No. 3 - 1974

0 M - 1.5M White saprolite,
1.5M - 3.0M " "
3.0M - 4.25M " "
4.25M - 4.5M Yellow saprolite

BORE No. 4 - 1974

0 M - 1.5M White saprolite
1.5M - 2.4M Yellow saprolite

BORE No. 5 - 1974

0 M - 1.5M Yellow and white saprolite
1.5M - ? Yellow saprolite

BORE No. 6 - 1974

0 M - 1.5M Yellow saprolite

BORE No. 7 - 1974

0 M - 2.4M Yellow saprolite
2.4M - 3.0M Green saprolite

BORE No. 8 - 1974

0 M - 0.3M White saprolite
0.3M - 0.6M White and yellow saprolite
0.6M - 4.5M White saprolite
4.5M - ? " "

BORE No. 9 - 1974

0 M - 1.5M White saprolite
1.5M - 3.0M " "
3.0M - 4.5M " "

BORE No. 10 - 1974

0 M - 1.5M White saprolite
1.5M - 2.35M Yellow saprolite

BORE No. 11 - 1975

0' - 15' Sand and gravel
 15' - ? Putty coloured saprolite

BORE No. 12 - 1975

0' - 10' Gravel and brown clay
 10' - 58' Near white granite saprolite. Br. 70

BORE Nos. 13, 14, & 15 - 1975

All encountered only gravel and clay drift.

ARCADIA AREA

=====

BORE No. 1 - 1970

0' - 2'	Soil and gravel		
2' - 9'	White and yellow clay		
9' - 15'	Buff granite saprolite, whitens on drying	Br. 73.6	Y. 44%
15' - 20'	" " " "	Br. 70.5	Y. 48%
20' - 25'	" " " "	Br. 73.7	Y. 54%
25' - 30'	Grey saprolite	Br. 65.5	Y. 47%
30' - 35'	Grey-green saprolite	Br. 62.0	Y. 40%
Water at 2'6"			

BORE No. 2 - 1970

0' - 3' Soil and gravel
 3' - 8' Red and yellow clay
 8' - 13' White red and yellow clay
 13' - 20' Green clay

BORE No. 3 - 1970

0' - 4' Drift and stones
 4' - 9' Pink, cream and white clay
 9' - 19' Brown to green clay

BORE No. 4 - 1970

0' - 3'	Drift		
3' - 10'	Pink and white clay		
10' - 15'	Cream saprolite	Br. 76.9	Y. 45%
15' - 20'	" "	Br. 73.6	Y. 44%
20' - 25'	Buff saprolite	Br. 65.9	Y. 42%
25' - 30'	" "	Br. 63.5	Y. 44%
30' - 35'	Green saprolite	Br. 71.5	Y. 43%
Water at 1'6"			

BORE No. 5 - 1970

0' - 4' Drift
 4' - 9' White and yellow clay
 9' - 14' " " "
 14' - 19' Yellow clay
 19' - 24' Brown clay
 24' - 29' Green to brown clay

BORE No. 6 - 1970

0' - 22'	Surface soil and hardpan		
2' - 18'	White, pink and yellow clay		
18' - 23'	Cream saprolite, some Fe stain	Br. 77.5	Y. 41%
23' - 28'	Cream saprolite	Br. 75.4	Y. 46%
28' - 33'	Buff saprolite, whitens on exposure	Br. 64.8	Y. 46%
33' - 38'	Buff saprolite, whitens on exposure	Br. 63.6	Y. 46%
38' - 42'	Buff saprolite, whitens on exposure	Br. 59.5	Y. 48%

BORE No. 7- 1970

0' - 2'	Drift and stones		
2' - 5'	Yellow clay		
5' - 11'	White and yellow clay		
11' - 16'	Cream saprolite	Br. 76.9	Y. 51%
16' - 21'	" "	Br. 80.2	Y. 45%
21' - 26'	" "	Br. 79.3	Y. 44%
26' - 31'	Cream and white saprolite with coarse quartz	Br. 79.1	Y. 45%

Water at 3'.0"

BORE No. 8 - 1970 (Drillers Log)

0' - 5' Yellow clay
 5' - 10' Yellow and white clay
 10' - 15' Red and white clay
 15' - 20' Green and yellow clay
 No water

BORE No. 9 - 1970 (Drillers Log)

0' - 5' Yellow and red clay
 5' - 10' Pink, yellow and white clay
 10' - 20' Pink and white clay
 20' - 24' Pink, yellow and white clay
 No water

BORE No. 10 - 1970 (Drillers Log)

0' - 10' Yellow, pink and white clay
 10' - 15' Drift, white and brown clay
 15' - 17'6" White and brown clay
 17'6" - 24' Drift with bands of white and cream clay
 Water at 2' 6"

BORE No. 11 - 1970 (Drillers Log)

0' - 9' Pink, yellow and white clay
 9' - 14' White clay
 14' - 19' White and cream clay
 19' - 24' Dark cream and green clay
 24' - 29' Green clay
 Water at 20'

BORE No. 12 - 1970 (Drillers Log)

0' - 5' Drift and clay
 5' - 10' Green and yellow granite
 10' - 25' Green granite
 Water at 1'

BORE No. 13 - 1970 (Drillers Log)

0' - 7' Hard drift
 7' - 10' Hard clay
 10' - 20' Green granite
 No water

BORE No. 14 - 1970 (Drillers Log)

0' - 7' Hard drift
 7' - 10' Hard clay
 10' - 20' Green granite
 Water at 2'

BORE No. 15 - 1970 (Drillers Log)

0' - 5' Drift and clay
 5' - 10' Yellow, red and white clay
 10' - 15' White and yellow clay
 15' - 25' White and green clay
 No water

BORE No. 16 - 1970 (Drillers Log)

0' - 6'6" Drift
 6'6" - 8'6" White clay
 8'6" - 11'6" Yellow clay
 11'6" - 25' White and pink clay
 25' - 27' White and yellow clay
 Water at 20'

BORE No. 17 + 1970 (Drillers Log)

0' + 3' Drift
 3' - 5' Drift and clay
 5' - 10' White and rust coloured clay
 10' - 20' White clay
 20' - 30' Cream and white clay
 30' - ? " " "
 Water at 1'6"

BORE No. 18 - 1970 (Drillers Log)

0' - 4' Drift
 4' - 5' Sticky clay
 5' - 9' White and red pug
 9' - 13' White clay
 13' - 15' White and red clay
 15' - 19' White clay
 19' - 20' Brown and white clay
 20' - 30' White and green clay
 Water at 1'

BORE No. 19 - 1970 (Drillers Log)

0' - 6' Drift
 6' - 11' Green and yellow granite
 Water at 4'6"

BORE No. 20 - 1970 (Drillers Log)

0' - 4' Drift
 4' - 9' Drift, yellow and white clay
 9' - 11' White and yellow clay
 11' - 16' White and cream clay
 16' - 36' " "
 36' - 41' Black and white clay
 Water at 2'

BORE No. 21 - 1975

0' - 5' Gravel
 5' - 20' Yellow clay improving with depth
 20' - 25' Buff to white clay
 25' - 35' " " "
 35' - 45' Blue - grey clay

Br. 65.5

BORE No. 22 - 1975

0' - 5' Gravel and clay
 5' - 10' Buff granite saprolite
 10' - 15' Fe stained granite saprolite
 15' - 20' " " " " Less stained
 20' - 35' Buff to pale green saprolite
 35' - 50' Pale green saprolite

Br. 72.5

BORE NO. 8 - 1978

0' - 10' Brown gravel
 10' - 20' Brown gritty clay
 20' - 33' Brown to green clay with fine quartz and mica

BORE No. 9 - 1978

0' - 10' Grey sand and gravel
 10' - 40' Grey sandy clay with some coarser grit.

CLIFTON CREEK
=====BORE No. 1 - 1975

0' - 12'6" Soil and gravel
 12'6"-40' Buff to green probable granite saprolite.
 Whitens on drying.
 40' - ? Hard -- ? granite.

BORE No. 2 - 1975

0' - 5' Yellow to green gravel
 5' - 22' Green probable saprolite
 22' - ? Hard -- ? granite.

GARIBALDI
=====

Hand bores only. Logs were not recorded.

TEBRAKUNNA - LANKA ROAD
=====

1978 wild cat bores, positions shown on locality plan as 1/78 to 14/78.

BORE No. 1

0' - 42' Wet yellow granite detritus.

BORE No. 2

0' - 19' Yellow granite detritus.
 19' - ? Hard rock.

BORE No. 3

0' - 3' Grey soil and gravel
 3' - 37' Red to yellow granite detritus.

BORE No. 4

0' - 15' Grey soil and brown gravel
 15' - 38' Yellow probable granite saprolite
 38' - 39' White probable granite saprolite

BORE No. 5

0' - 15' Gravel with clay bands
 15' - 20' Grey granite saprolite, dries white
 20' - 25' Pale yellow saprolite
 25' - 26' Yellow colour more intense

BORE No. 6

0' - 15' Brown gravel and sand
 15' - 25' Yellow granite saprolite

BORE No. 7

0' - 30' Brown, green and yellow granite detritus
 Decomposed green granite in bottom

BORE No. 8

0' - 10' Brown gravel
 10' - 20' Brown gritty clay
 20' - 33' Brown to green clay with small quartz and secondary mica.

BORE No. 9

0' - 10' Grey sand and gravel
 10' - 40' Grey sandy clay with some coarser grit

BORE No. 10

0' - 15' Grey to brown drift with small water-worn pebbles
 15' - 30' Brown to green clayey drift
 30' - 40' Similar but wetter and more green colour

011

BORE No. 11

0' - 35' Grey and brown gravel and drift

BORE No. 12 (In gravel pit)

0' - 30' Grey and brown gravel with minor clay

BORE No. 13

0' - 3' Gravel
 3' - 5' Grey-white granite saprolite
 5' -10' Wet white saprolite
 10' -15' Wet yellowish saprolite
 15' -30' Wet white saprolite
 30' -34' Similar

BORE No. 14

0' - 7' Gravel
 7' - ? Hard.

EL. 21/70 *John J. Steveson*

0184

amdel

The Australian Mineral Development Laboratories

710014

Flemington Street, Frewville, South Australia 5063
Phone 79 1662, telex AA82520

Please address all correspondence to the Director
In reply quote: **MP 3/132/0**

Materials - Clay

25 October, 1972

The Chief Chemist
Associated Pulp and Paper Mills Ltd
PO Box 201
BURNIE Tasmania 7320

REPORT MP 1656/73

YOUR REFERENCE: Letter dated 10/10/72

MATERIAL: Four clay samples

LOCALITY: Tasmania

IDENTIFICATION: "Amber Hill Composite",
"Anson's Bay Road",
"Scott's Composite", and
"Stronach Mine Composite"

DATE RECEIVED: 13/10/72

WORK REQUIRED: Clay mineralogy, with special reference
to kaolinite and halloysite

Investigation and Report by: Dr R.N. Brown

Electron microscopy by: Dr W.G. Steveson

Officer in Charge, Mineralogy/Petrology Section: Dr K.J. Henley

K. J. Henley

for F.R. Hartley
Director

013

MINERALOGY OF FOUR CLAY SAMPLES

1. INTRODUCTION

Four samples of loose, off-white clay were received from Associated Pulp and Paper Mills Limited, Burnie, for assessment of the clay mineralogy. They were understood to be kaolin clays, and interest was expressed in the possible presence of halloysite.

2. PROCEDURE

The samples were mounted in turn in the x-ray diffractometer, and diffraction traces were recorded from 30° - 60° 2θ using cobalt radiation.

Subsequently the samples were dispersed in water as very dilute suspensions which were applied to prepared electron microscope grids and allowed to dry. The prepared grids were examined in the electron microscope for the presence of halloysite particles.

3. RESULTS

All four samples were found to be essentially kaolinite clays, with only minor amounts of other minerals present.

"Amber Hill Composite" consisted dominantly of highly crystalline kaolinite, with a trace (<5%) of mica/illite and a trace of quartz (approximately 1%). No halloysite was detected.

"Anson's Bay Road" and "Stronach Mine Composite" were again dominantly kaolinite, apparently rather less crystalline than the previous sample with traces of mica/illite, potash feldspar and quartz (approximately 1-2%). "Anson's Bay Road" contained a slight trace of halloysite (estimated <0.01% in the electron microscope), whilst "Stronach Mine Composite" was free of halloysite.

"Scott's Composite" was dominantly kaolinite, only moderately crystalline, with a trace of mica/illite and a trace of quartz (approximately 1%). This was the only clay of the four in which appreciable halloysite was found; its level was estimated to be $10\% \pm 5\%$.

014



amdel

The Australian Mineral Development Laboratories

Flemington Street, Frewville, South Australia 5063
Phone 79 1662, telex AA82520

M. D. Dickenson

710016

Please address all correspondence to the Director
In reply quote: MP 3/132/0

9 November 1972

The Chief Chemist,
Associated Pulp & Paper Mills Ltd,
PO Box 201,
BURNIE Tas 7320

REPORT MP 2022/73

YOUR REFERENCE:	Letter dated 1/11/72; Order No. T 10583 dated 9/10/72.
MATERIAL:	Two clay samples.
LOCALITY:	Tasmania.
IDENTIFICATION:	"Rugby Flat" and "High level".
DATE RECEIVED:	6/11/72.
WORK REQUIRED:	Clay mineralogy, with special reference to kaolinite and halloysite.

Investigation and Report by: Dr R. N. Brown.

Electron Microscopy by: Dr W.G. Spencer.

Officer in Charge, Mineralogy-Petrology Section: Dr K.J. Henley.

K. J. Henley

for F. R. Hartley
Director

C15

MINERALOGY OF TWO CLAYS

1. INTRODUCTION

Two further clay samples were received from APPM, Burnie, additional to the four recently received and reported under MP 1656/73. These were to be charged against the same order number. Particular interest centred on the possible presence of halloysite in the samples.

2. PROCEDURE

The samples were mounted in the X-ray diffractometer, and diffraction traces were recorded of the bulk samples using cobalt radiation.

The samples were dispersed in water (as described under the previous job) and examined in the electron microscope for the presence of characteristically-shaped halloysite particles.

3. RESULTS

Both samples were identified by X-ray diffraction as predominantly kaolinite-halloysite type clays, but of disordered type, as opposed to the four crystalline clays in the previous report. Mica/illite was observed to be present in both as an impurity, at moderate percentage levels (possibly about 10-20%).

"Rugby Flat" contained only a trace of quartz (ca 0.5%) whilst "High Level" contained rather more quartz (ca 3-4%) and a little potash feldspar (say up to about 5%).

The electron microscope examination showed that "Rugby Flat" contained abundant rather stubby halloysite particles; the percentage level was difficult to judge, but was possibly about 50%. In contrast, "High Level" contained only a trace of halloysite - probably <0.2%. The particle shape in this case was of the more usual long slender type.

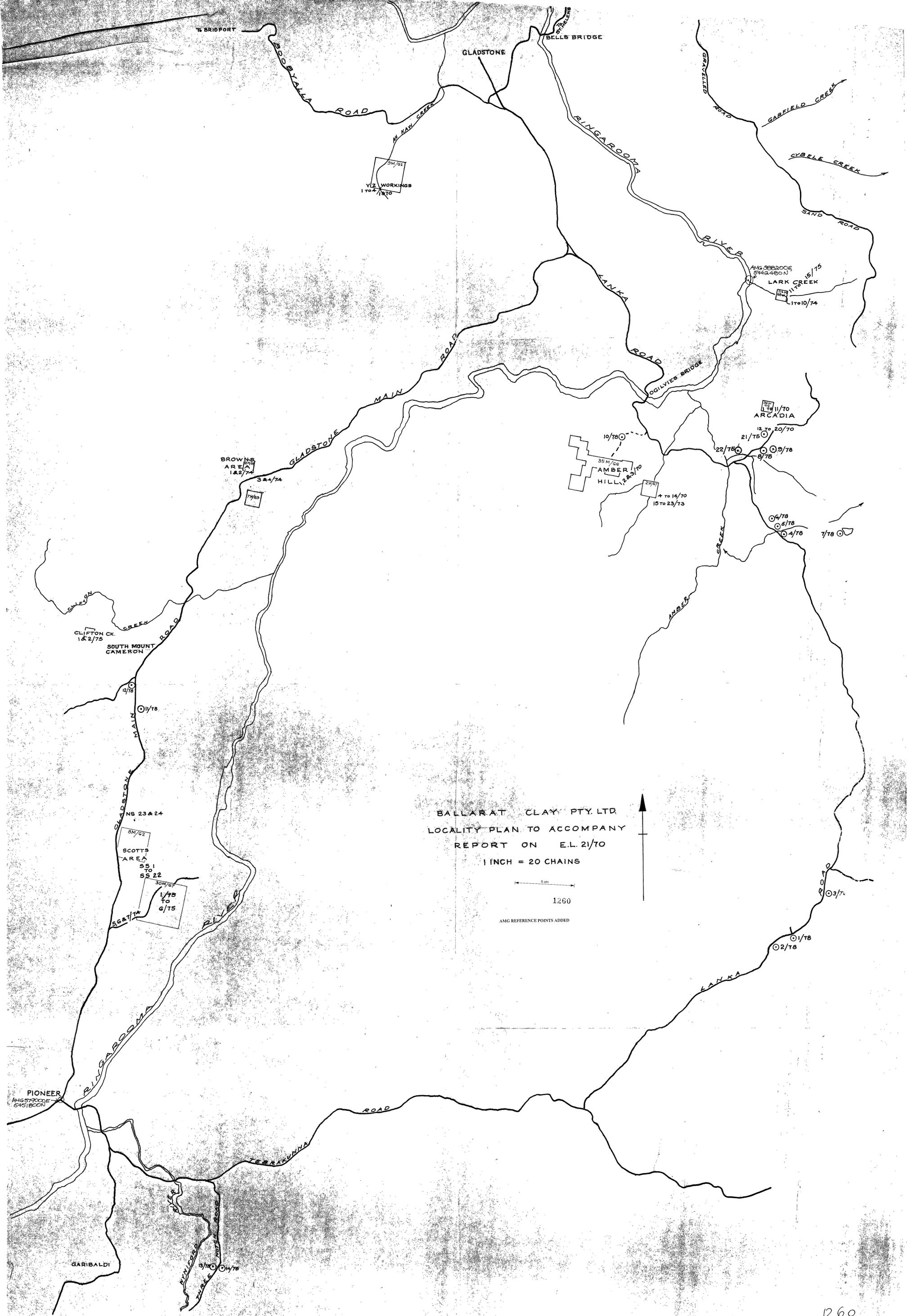
4. NOTE ON MONTMORILLONITE

It should be remarked, with reference to both this job and the previous one, that owing to the understanding that the main interest was in kaolin and halloysite, oriented clay samples of the fine particle-size fractions were not prepared and examined. The relevance in this context is that this would have constituted a more sensitive test for the presence of small amounts of montmorillonite than that obtained in the present work. This further work can be carried out if required.

dl:2.

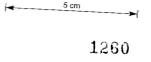
PLAN LIST

	SCALE
LOCALITY PLAN	1" = 20 CHAINS
KAOLIN PROJECT – SCOTTS AREA	1" = 100'
KAOLIN PROJECT – BROWNS AREA	1" = 100'
AMBER HILL AREA – SCOUT BORES	1" = 100'

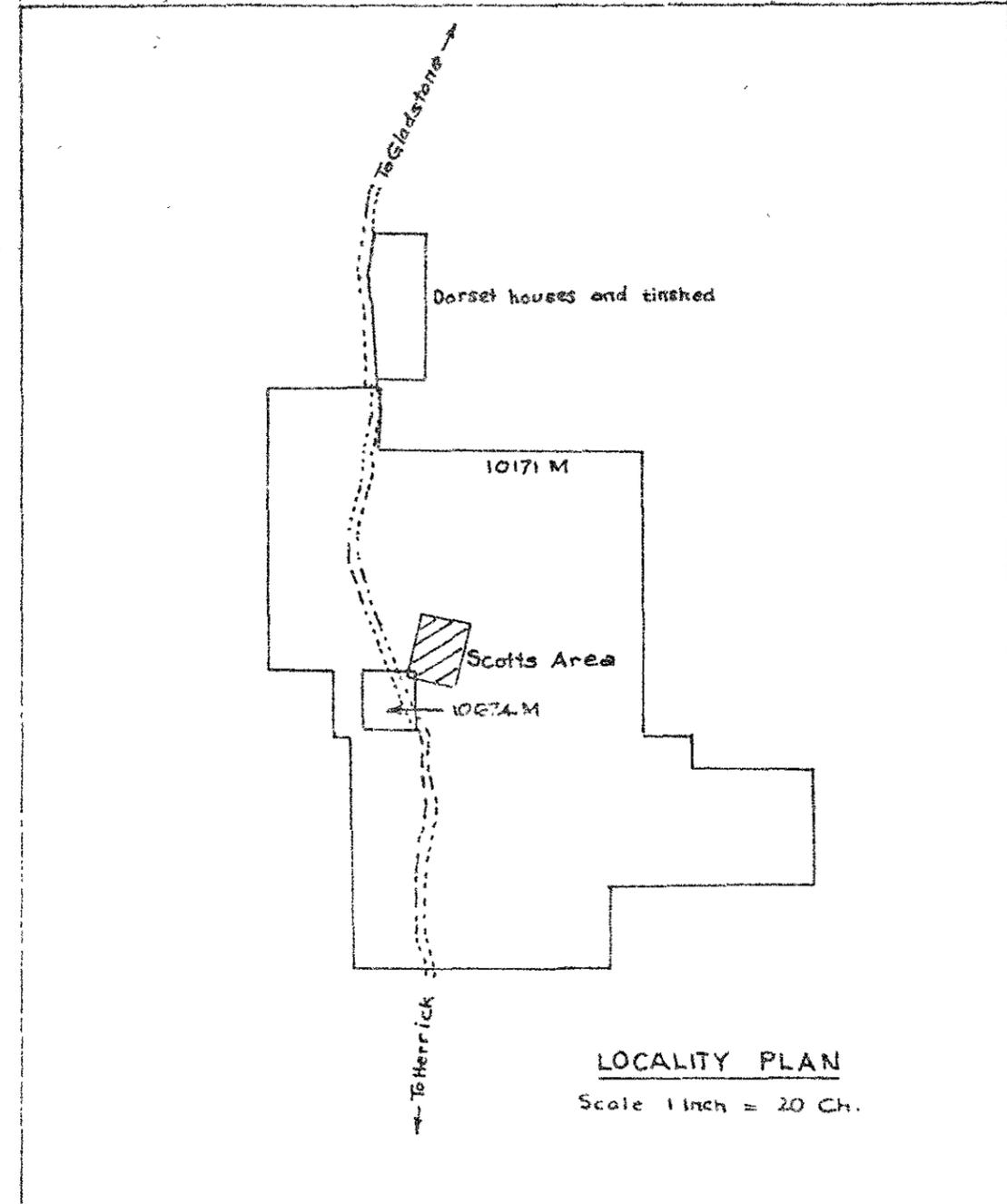
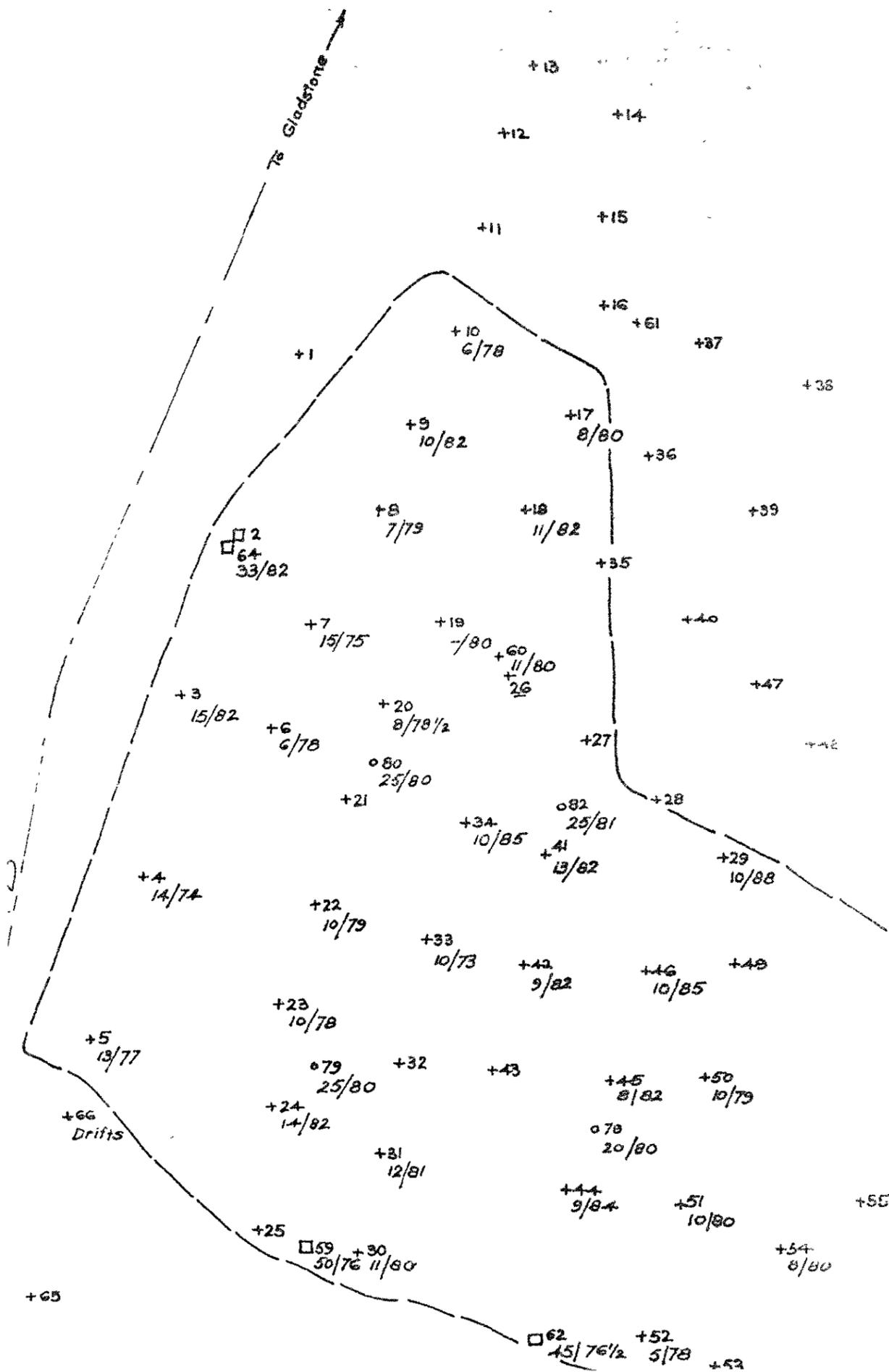


BALLARAT CLAY PTY. LTD.
 LOCALITY PLAN TO ACCOMPANY
 REPORT ON E.L. 21/70

1 INCH = 20 CHAINS



AMG REFERENCE POINTS ADDED

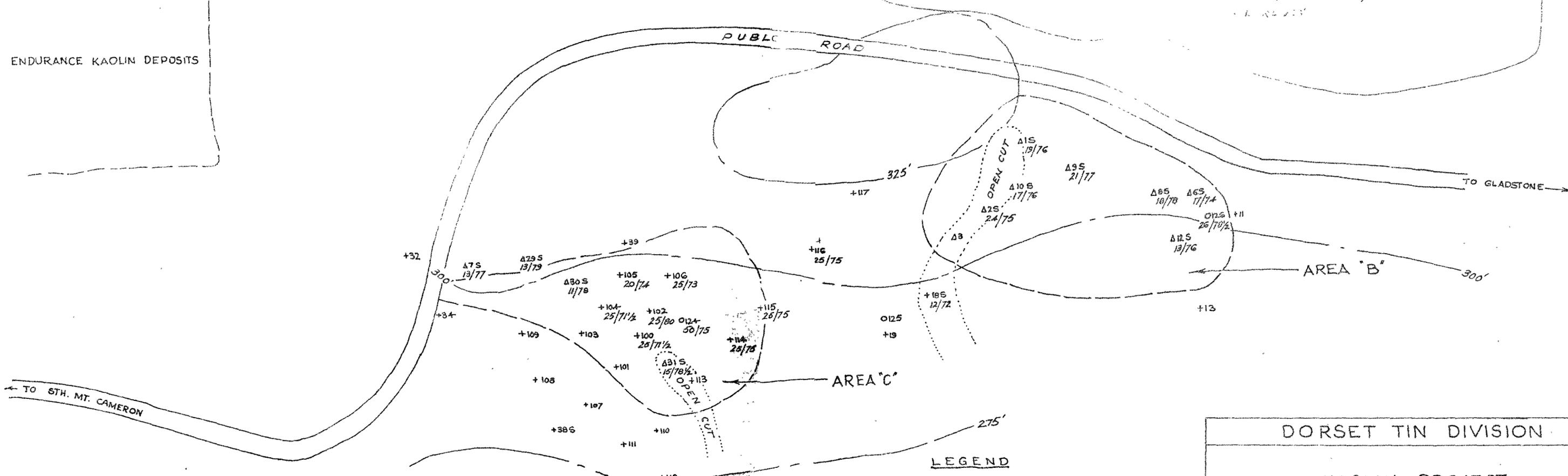
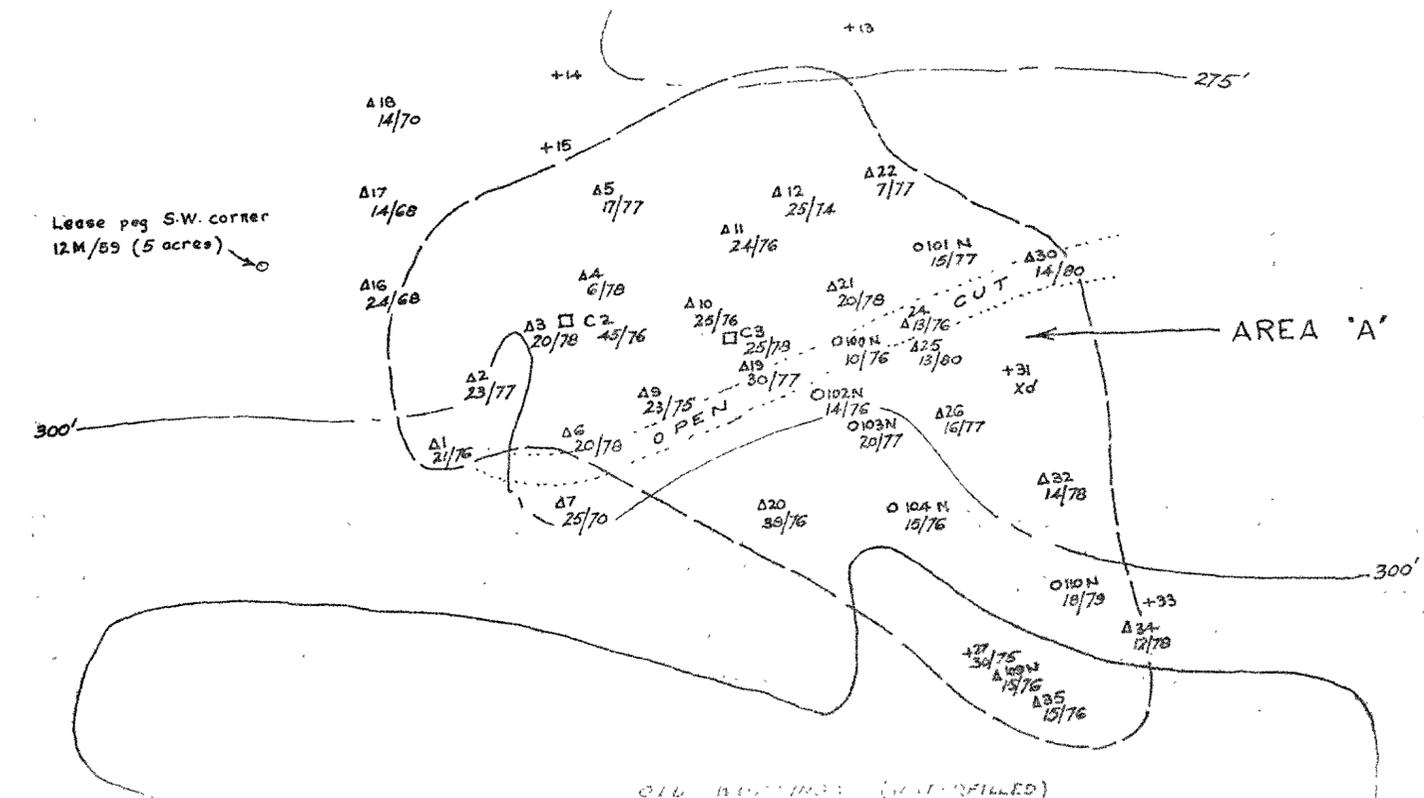
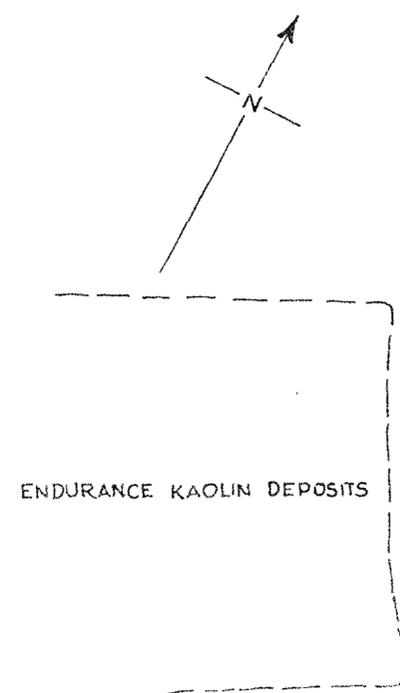


- 5 cm
- LEGEND
- + 5" Hand bore
 - 6" Side bore
 - 16" Conrad bore
 - [] Selected area
 - 14/82 Depth sampled feet / Brightness

DORSET TIN DIVISION

KAOLIN PROJECT *Scale*
SCOTTS AREA *1 inch = 100 feet*

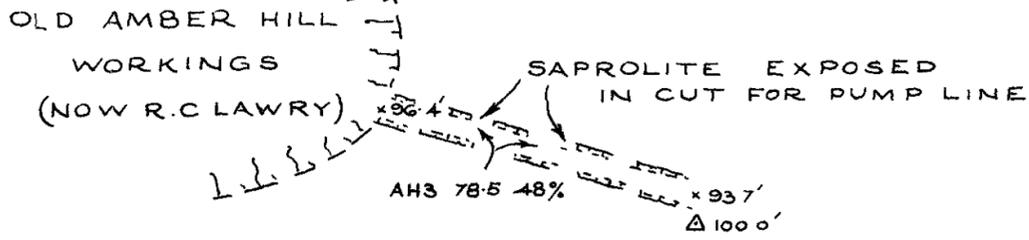
710021
1258



Lease peg S.W. corner
7M/59 (10 acres)

- LEGEND**
- △ 5" Hand bore (A.P.R.M.)
 - 16" Conrad bore
 - 6" Side bore
 - Selected area
 - + Dorset 5" bores
 - 20/78 Depth feet/Brightness

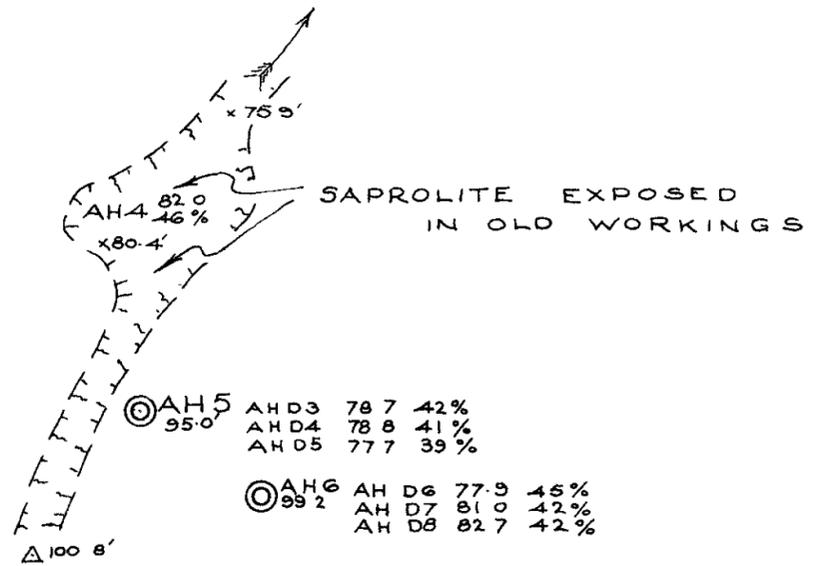
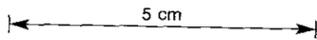
DORSET TIN DIVISION	
KAOLIN PROJECT BROWNS AREA	
710022	
R HARE & ASSOCIATES	SCALE: 1 INCH = 100 FEET
Date: 1/1/63	5cm



- ⊙ AH1
109.5'
15' (No Sample)
- ⊙ AH2
97.3'
21' (No Sample)
- ⊙ AH3
83.6'
16' (No Sample)

- ⊙ AH4
89.5'
17'
- AH D1 76.6 39%
- AH D2 73.5 26%

AMBER HILL AREA
SCOUT BORES
1 INCH = 100 FT.

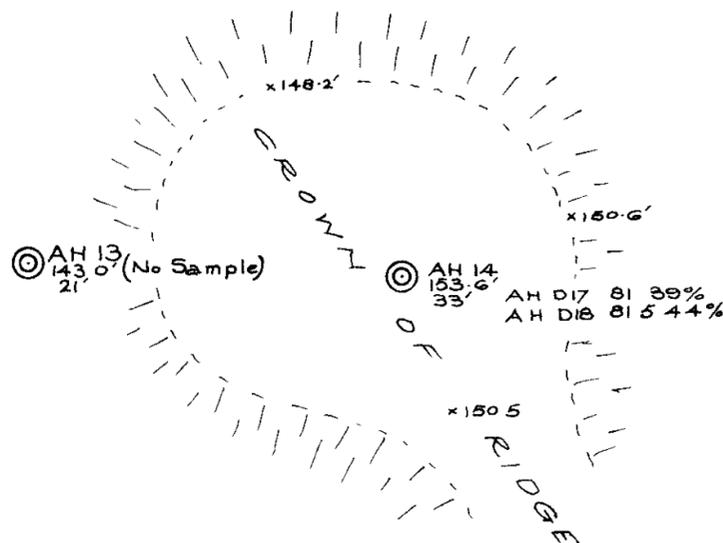


- ⊙ AH5
95.0'
- AH D3 78.7 42%
- AH D4 78.8 41%
- AH D5 77.7 39%
- ⊙ AH6
99.2'
- AH D6 77.9 45%
- AH D7 81.0 42%
- AH D8 82.7 42%
- ⊙ AH7
105.9'
- AH D9 86.0 46%
- AH D10 85.0 55%
- AH D11 82.8 51%

- ⊙ AH8
110.9' (No Sample)

- (No Sample) ⊙ AH12
127.3'
12'
- ⊙ AH11
127.2'
13'
- AH D15 75 34%
- AH D16 71 18%
- ⊙ AH10
125.1'
23'
- AH D12 79.9 44%
- AH D13 78 34%
- AH D14 77 33%

- ⊙ AH9 (No Sample)
116.9'



710023

A.P.P.M.
E.L.21/70